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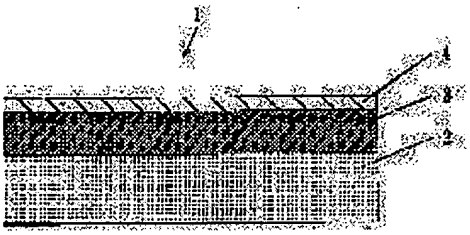

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(54) **DECORATIVE SHEET**

(57)Abstract:
PROBLEM TO BE SOLVED: To provide a decorative sheet of which the design is not affected by the coloration such as yellowing or the like of a foamed resin layer.
SOLUTION: A decorative sheet is obtained by successively providing a base material layer 2, a foamed resin layer 3 comprising a thermoplastic resin containing an additive based on a foaming agent and a colored resin layer 4 based on a thermoplastic resin layer containing an additive based on titanium dioxide.

CLAIMS

[Claim(s)]
[Claim 1] The makeup sheet characterized by preparing the base-material layer, the foaming resin layer which consists of thermoplastics containing the additive which makes

a foaming agent a subject, and the coloring resin layer which makes a subject the thermoplastics containing the additive which makes a titanium dioxide a subject one by one.
[Claim 2] The makeup sheet according to claim 1 characterized by having a pattern layer on the aforementioned coloring resin layer.
[Claim 3] A makeup sheet given in either of the claims 1 and 2 characterized by having a protective layer on the maximum front face by the side of the aforementioned coloring resin layer formation of the aforementioned makeup sheet.
[Claim 4] The makeup sheet according to claim 1 to 3 characterized by the thing which are located in the aforementioned base-material layer and an opposite side, and which it applies to the aforementioned foaming resin layer from an outside layer most, and is performed for the concavo-convex pattern.
[Claim 5] The makeup sheet according to claim 1 with which the aforementioned thermoplastics is characterized by the bird clapper from olefin system thermoplastics.
[Claim 6] The makeup sheet according to claim 5 characterized by the melting point being higher than the thermoplastics in which the thermoplastics which forms the aforementioned coloring resin layer forms the aforementioned foaming resin layer.
[Claim 7] A makeup sheet given in either of the claims 5 and 6 characterized by at least one of a flame retarder and the radical scavengers being added by the aforementioned foaming resin layer and/or the aforementioned coloring resin layer.
[Claim 8] The makeup sheet according to claim 1 to 7 characterized by preparing the adhesives layer between the layers of the aforementioned base-material layer and the aforementioned foaming resin layer, and/or between the layers of the aforementioned coloring resin layer and the aforementioned pattern layer.
[Claim 9] The makeup sheet according to claim 1 to 8 characterized by the aforementioned foaming agent being a pyrolyzed type foaming agent.
[Claim 10] The makeup sheet according to claim 1 to 9 with which the aforementioned base-material layer is characterized by the bird clapper from the lining paper for wallpaper.

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[The technical field to which invention belongs] this invention relates to the makeup sheet which prevents in more detail that coloring factors, such as yellowish color of a foaming layer, influence a design about the makeup sheet used for the interior of a building, surface makeup of fittings, the interior of vehicles, etc.
[0002]
[Description of the Prior Art] Conventionally, a vinyl-chloride-resin layer is formed on a paper base, a pattern layer is prepared on this vinyl-chloride-resin layer, the aforementioned vinyl-chloride-resin layer is made to foam, a concavo-convex pattern is given, and the so-called vinyl chloride makeup sheet which gave design nature with a feeling of volume and cushioning properties is used widely. This vinyl chloride makeup sheet raises the concealment nature of a foaming resin layer, and the titanium dioxide

which is usually a high concealment pigment is added by the foaming resin layer in order to raise design nature.
[0003] However, yellowish color arises under the influence of a foaming agent, and the foaming resin layer by which this titanium dioxide was added serves as whiteness which yellow required, without the whiteness which a titanium dioxide originally has being discovered, and has the problem of spoiling design nature. Furthermore, a pattern layer is affected, the whole pattern layer serves as a design which wore yellow, and this yellowish color has the problem that an original design is not reproduced. Especially this phenomenon is appeared much more notably in the design to which the pattern layer made white the keynote, and has the problem of becoming that in which the design itself is completely different from an original design.
[0004] Moreover, as another problem, if incineration disposal is carried out, since gas with detrimental hydrogen chloride gas etc. will be generated at the time of incineration, this vinyl chloride makeup sheet has the problem of scrap wood processing in which incineration disposal cannot be performed, and a problem of intoxication by attracting gas with this hydrogen chloride gas detrimental in case of a fire etc. with a common incinerator.
[0005]
[Problem(s) to be Solved by the Invention] Then, the place which this invention is made in view of the above-mentioned trouble, and is made into the 1st purpose is offering the makeup sheet with which coloring factors', such as yellowish color of a foaming resin layer, do not influence a design, and the place made into the 2nd purpose is offering the makeup sheet which can be pressed [whether generating of hydrogen chloride gas etc. of detrimental gas can be performed, and] down, when carrying out incineration etc.
[0006]
[Means for Solving the Problem] As a result of inquiring that this invention person etc. should solve the above troubles, the makeup sheet of this invention according to claim 1 is characterized by preparing the base-material layer, the foaming resin layer which consists of thermoplastics containing the additive which makes a foaming agent a subject, and the coloring resin layer which makes a subject the thermoplastics containing the additive which makes a titanium dioxide a subject one by one. Thus, by constituting, coloring factors, such as yellowish color of the foaming resin layer by the foaming agent, can be covered by preparing a coloring resin layer. In order that it may not have said that the aforementioned coloring resin layer grows yellow and the aforementioned foaming resin layer may not express The foaming cell of a uniform configuration can be obtained efficiently, and while having design nature with a clear coloring resin layer without yellowish color etc., and a feeling of volume, the makeup sheet excellent in cushioning properties can be obtained.
[0007] Moreover, invention according to claim 2 is characterized by having a pattern layer on the aforementioned coloring resin layer in the makeup sheet indicated to a claim 1. thus, the thing to constitute -- in addition -- much more -- high -- it can consider as a design makeup sheet Moreover, a pattern layer cannot be influenced of coloring factors, such as yellowish color of a foaming resin layer, and can discover an original pattern layer.
[0008] Moreover, invention according to claim 3 is characterized by having a protective layer on the maximum front face by the side of the aforementioned coloring resin

stratification of the aforementioned makeup sheet in the makeup sheet indicated to either of the claims 1 and 2. Thus, by constituting, the makeup sheet which was further excellent in abrasion resistance, chemical resistance, resistance to contamination, etc. can be obtained.

[0009] Moreover, invention according to claim 4 is characterized by the thing which are located in the aforementioned base-material layer and an opposite side and which it applies to the aforementioned foaming resin layer from an outside layer most, and is performed for the concavo-convex pattern in the makeup sheet indicated to either of the claims 1-3. Thus, the concavo-convex pattern of various configurations can be acquired by constituting.

[0010] Moreover, in the makeup sheet which indicates invention according to claim 5 to a claim 1, the aforementioned thermoplastics is characterized by the bird clapper from olefin system thermoplastics. Thus, by constituting, the comparatively low cost makeup sheet which can solve the problem of intoxication by attracting gas with detrimental problem of scrap wood processing, hydrogen chloride gas which occurs in case of a fire can be obtained.

[0011] Moreover, invention according to claim 6 is characterized by the melting point being higher than the thermoplastics in which the thermoplastics which forms the aforementioned coloring resin layer forms the aforementioned foaming resin layer in the makeup sheet indicated to a claim 5. Thus, while being able to raise the foaming efficiency of a foaming resin layer certainly by constituting, the foaming resin layer of an almost uniform configuration with little variation in a foaming cell can be obtained.

[0012] Moreover, invention according to claim 7 is characterized by at least one of a flame retarder and the radical scavengers being added by the aforementioned foaming resin layer and/or the aforementioned coloring resin layer in a makeup sheet given in either of the claims 5 and 6. Thus, while being able to give fire retardancy to a foaming resin layer and/or a coloring resin layer by constituting, degradation of the foaming resin layer by ultraviolet rays and/or a coloring resin layer can be prevented, and weatherability can be raised.

[0013] Moreover, invention according to claim 8 is characterized by preparing the adhesives layer between the layers of the aforementioned base-material layer and the aforementioned foaming resin layer, and/or between the layers of the aforementioned coloring resin layer and the aforementioned pattern layer in the makeup sheet indicated to either of the claims 1-7. Thus, let class indirect arrival intensity be a still stronger thing by constituting.

[0014] Moreover, invention according to claim 9 is characterized by the aforementioned foaming agent being a pyrolyzed type foaming agent in the makeup sheet indicated to either of the claims 1-8. Thus, by constituting, the foaming agent of a low cost can be used and cost of a makeup sheet can be made cheap. Moreover, also in the aforementioned foaming agent, since an AZOJI carvone amide or an azobis formamide are not detrimental while they are excellent in fire retardancy or self-extinguishing and give fire retardancy to a foaming resin layer, they are suitable.

[0015] Moreover, in the makeup sheet which indicates invention according to claim 10 to either of the claims 1-9, the aforementioned base-material layer is characterized by the bird clapper from the lining paper for wallpaper. Thus, fire retardancy can be given to a base-material layer by constituting.

[0016]
[Embodiments of the Invention] The above-mentioned this invention is explained in more detail below using a drawing etc. First, drawing 1 is the lamination view of the 1st operation gestalt of the makeup sheet of this invention, and drawing 2 is the lamination view of the 2nd operation gestalt of the makeup sheet of this invention. 1 in drawing, and 11 -- a makeup sheet and 2 -- in a coloring resin layer and 5, a pattern layer and 6 show a protective layer and 7 shows [a paper base and 3 / a foaming resin layer and 4] a concavo-convex pattern, respectively
[0017] Drawing 1 shows the lamination view of the 1st operation gestalt of the makeup sheet of this invention, and the makeup sheet 1 of this invention forms the foaming resin layer 3 which consists of thermoplastics containing the additive which makes a foaming agent a subject on a paper base 2, and forms the white coloring resin layer 4 which consists of thermoplastics containing the additive which makes a titanium dioxide a subject on this foaming resin layer 3. Thus, by constituting, it cannot be influenced by the foaming resin layer 3 which the coloring resin layer 4 produces with a foaming agent of yellowish color, the color of the original coloring resin layer 4, i.e., white, can be discovered, and design nature can be raised.
[0018] What is called lining papers for usual wallpaper, such as minerals paper which mixed minerals agents, such as a flameproof paper of the pulp subject into which water-soluble flame retarders, such as sulfanil GUANAJIN and phosphoric acid guanidine, were infiltrated or an aluminum hydroxide, and a magnesium hydroxide, as the aforementioned paper base 2 used for this invention, can be used, and 50 - 300 g/m2 is suitable as the basis weight.
[0019] moreover, as thermoplastics used for the aforementioned foaming resin layer 3 and the aforementioned coloring resin layer 4 For example, vinyl chloride system resins, such as vinyl chloride resin, a vinyl chloride vinyl acetate copolymer, and a vinyl chloride-acrylic copolymer, a polyacrylonitrile, Or acrylic resins, such as a copolymer which consists of a polyacrylonitrile, methyl acrylate, and a butadiene, One sort or ethylene of polyolefines, such as polyethylene, polypropylene, a polybutene, a polybutadiene, and a polyisoprene Two or more sorts of copolymers of olefins, such as a propylene, a butene, a butadiene, and an isoprene A carbon number Or the copolymer of four or more alpha olefins (line low density polyethylene), Or an ethylene-acrylic-acid copolymer, an ethylene-methyl-acrylate copolymer, Although olefin system resins, such as an ethylene-ethyl-acrylate copolymer, an ethylene-methacrylic-acid copolymer, an ethylene vinylacetate copolymer, and an ethylene-vinyl acetate copolymer saponification object, urethane resins, or these mixed resins can be used When the 2nd purpose of this invention or cost is taken into consideration, polyethylene, One sort or ethylene of polyolefines, such as polypropylene, a polybutene, a polybutadiene, and a polyisoprene Two or more sorts of copolymers of olefins, such as a propylene, a butene, a butadiene, and an isoprene A carbon number Or the copolymer of four or more alpha olefins (line low density polyethylene), Or an ethylene-acrylic-acid copolymer, an ethylene-methyl-acrylate copolymer, It is desirable to use olefin system resins, such as an ethylene-ethyl-acrylate copolymer, an ethylene-methacrylic-acid copolymer, an ethylene vinylacetate copolymer, and an ethylene-vinyl acetate copolymer saponification object, urethane resins, or these mixed resins.
[0020] Moreover, the thing which melted and solution-ized the above-mentioned

thermoplastics to the solvent as a method of forming the aforementioned foaming resin layer 3 and the aforementioned coloring resin layer 4 using the above-mentioned thermoplastics, Or the roll coat method of common knowledge of what emulsified and emulsion-ized the above-mentioned thermoplastics, If it can form by carrying out coating and drying by gravure, the knife coat method, etc. and is in the aforementioned foaming resin layer 3, it can form by making it foam at a heating foaming furnace further. Moreover, it can form also by carrying out heating melting of the above-mentioned thermoplastics with a well-known T die extruder, and extruding it as an option. In this case, if it is, you may form the aforementioned foaming resin layer 3 by making it foam at the same time it carries out heating melting of the above-mentioned thermoplastics with a T die extruder and extrudes it, and carrying out heating melting with a T die extruder, extruding, and making it foam at a heating foaming furnace behind.

[0021] Moreover, although the thermal-expansion type capsule foaming agent which connoted the hydrocarbon of the low boiling point as a foaming agent used for the aforementioned foaming resin layer 3 can also be used, while being a low cost, the pyrolyzed type foaming agent of azo system compounds, such as an AZOJI carvone amide from the point which is excellent in fire retardancy or self-extinguishing, and can give fire retardancy to the aforementioned foaming resin layer 3, and an azobis formamide, is suitable. In addition, the amount of mixtures to the aforementioned thermoplastics of the aforementioned pyrolyzed type foaming agent is the aforementioned thermoplastics 100 in general, although what is necessary is just to decide suitably by the design nature demanded. 2 - 10 weight section is suitable to the weight section.

[0022] Drawing 2 shows the lamination view of the 2nd operation gestalt of the makeup sheet of this invention, and it forms the concavo-convex pattern 7, the makeup sheet 11 of the 2nd operation gestalt of this invention forming the pattern layer 5 on the aforementioned coloring resin layer 4 of the makeup sheet 1 of the 1st operation gestalt shown in drawing 1 , and forming a protective layer 6 on this pattern layer 5, and applying it to the aforementioned foaming resin layer 3 from this protective-layer 6 side. Thus, the pattern layer 5 which the aforementioned white coloring resin layer 4 has an original whiteness degree like the 1st operation gestalt, without being influenced by the aforementioned foaming resin layer 3 of yellowish color, and prepared on the aforementioned coloring resin layer 4 by constituting can also reappear the outstanding design nature, without spoiling an original design, since yellowish color of the aforementioned foaming resin layer 3 is intercepted in the aforementioned coloring resin layer 4.

[0023] Moreover, generally formation of the aforementioned pattern layer 5 can be formed in ink by the print processes of common knowledge, such as gravure, offset printing, silk screen printing, and decalcomania from an imprint sheet. As a printing pattern, there are printing patterns, such as a grain handle, a grain handle, a texture handle, leather ****, a geometric figure, a character, a sign, or whole surface solid. As ink, as a vehicle, chlorination polyolefines, such as a chlorinated polyethylene and chlorination polypropylene, Polyester, the polyurethane which consists of an isocyanate and a polyol, Although two or more sorts can be mixed, it can use and one sort or the thing which added and ink-ized a pigment, a solvent, various adjuvants, etc. to this can be used, the poly acrylic, polyvinyl acetate, a polyvinyl chloride, a vinyl chloride vinyl

acetate copolymer, a cellulose system resin, a polyamide system resin, etc. Considering the 2nd purpose of this invention, one sort, such as polyester, polyurethane which consists of an isocyanate and a polyol, the poly acrylic, polyvinyl acetate, a cellulose system resin, and a polyamide system resin, or the non-chlorine-based resin mixed two or more sorts is suitable.

[0024] Moreover, the aforementioned protective layer 6 gives abrasion resistance, chemical resistance, resistance to contamination, etc. to the makeup sheet 11 of this invention, resins, such as an epoxy system resin, an acrylic resin, an urethane system resin, a polyamide system resin, a polyester system resin, and an ionomer, are suitable for it, and what mixed one sort of the above-mentioned resin or two sorts or more in consideration of the adhesive property with the vehicle used for the pattern layer 6 or the thermoplastics used for the coloring resin layer 4 etc. should just be suitably used Moreover, what is necessary is just to carry out coating of the thing which solution-ized the aforementioned resin, or the thing which carried out heating fusion as the formation method of the aforementioned protective layer 6, for example, using suitably coating meanses, such as well-known gravure, the roll coat method, or the knockout coat method. As thickness of this protective layer 6, it is 0.5-100 by the time of dry cleaning. mum and usual are about 1-15 micrometers.

[0025] Moreover, formation of the aforementioned concavo-convex pattern 7 can form the concavo-convex pattern 7 by giving irregularity and cooling behind with the embossing version, from the aforementioned protective-layer 6 side, being able to apply it to the aforementioned foaming resin layer 3 from the aforementioned protective layer 6, when it is in the state where the aforementioned makeup sheet 11 was heated, using a well-known sheet or the embossing machine of a rotary formula. as the configuration of this concavo-convex pattern 7 -- a grain board -- a conduit -- there are a slot, slate surface irregularity, a face side texture, crepe, a grain, a hairline, 10,000 filament slots, etc.

[0026] Moreover, although illustration is not carried out, the aforementioned concavo-convex pattern 7 cannot be overemphasized by that it may apply to the foaming resin layer 3, and you may form from the coloring resin layer 4 side in the aforementioned makeup sheet 1.

[0027] Next, the case where processing uses easy olefin system thermoplastics for the thermoplastics used for the aforementioned foaming resin layer 3 and the aforementioned coloring resin layer 4 eco-friendlily [it is cheap in comparison also in cost, and / since there is also no problem of suction of the detrimental gas which occurs in case of the problem of scrap wood processing or a fire] is explained. Although this olefin system thermoplastics is eco-friendly to thermoplastics, such as a polyvinyl chloride and the poly acrylic, and excellent in it in chemical resistance or resistance to contamination with ****, when it is exposed to the problem, i.e., daylight, that weatherability is bad, from the outdoors, the aforementioned olefin system thermoplastics deteriorates and it has the problem that layer indirect arrival intensity with each class which adjoins the aforementioned olefin system thermoplastics falls with time.

[0028] Therefore, when using olefin system thermoplastics for the thermoplastics used for the aforementioned foaming resin layer 3 and the aforementioned coloring resin layer 4, it is necessary to prevent with-time degradation by the daylight (especially ultraviolet rays) of this olefin system thermoplastics. In order to prevent this, it is good for olefin system thermoplastics to add a radical scavenger. As this radical scavenger, a hindered

amine system radical scavenger is desirable. As this reason, a hindered amine system radical scavenger has a tetrapod alkyl piperidine in ****, it is presumed that there is a radical prehension operation which catches the radical generated in ultraviolet rays, and also the effect is demonstrated by the various mechanisms of action, such as an inactive operation of a hydroperoxide (ROOH), and the performance which was excellent as a multirole stabilizer is obtained. As an example of a hindered amine system radical scavenger Screw-(2, 2, 6, and 6-tetramethyl-4-piperidyl) sebacate, Screw-(N-methyl -2, 2 and 6, and 6-tetramethyl-4-piperidyl) sebacate, Screw-(1, 2, 2, 6, and 6-pen reservoir chill-4-piperidyl) sebacate, 1, 2, 2, 6, and 6-pen reservoir chill-4-piperidyl-tridecyl - 1, 2, 3, 4-butanetetracarboxylate, TETORAGISU - (2, 2, 6, and 6-tetramethyl-4-piperidyl) Hindered amine system radical scavengers, such as a compound currently indicated by the others which are -1, 2 and 3, 4-butanetetracarboxylate, etc., for example, JP,4-82625,B, can be mentioned. It is olefin system thermoplastics 100 which constitutes the aforementioned foaming resin layer 3 and the aforementioned coloring resin layer 4 as a charge of addition of this hindered amine system radical scavenger. It is 0.01-3.0 to the weight section. It is appropriate to carry out weight section addition.

[0029] Moreover, an ultraviolet ray absorbent can also be added to the aforementioned olefin system thermoplastics if needed. As an ultraviolet ray absorbent, for example A 2-(2 '- hydroxy-3', 5'-G tert-buthylphenyl)-5-chloro benzotriazol, A 2-(2'-hydroxy-3 '-tert-butyl -5'-methylphenyl)-5-chloro benzotriazol, A 2-(2'-hydroxy-3 '-tert-amyl -5'-isobutyl phenyl)-5-chloro benzotriazol, A 2-(2'-hydroxy-3 '- isobutyl -5'-methylphenyl)-5-chloro benzotriazol, 2'-hydroxyphenyl-5-chloro benzotriazol system ultraviolet ray absorbents, such as a 2-(2'-hydroxy-3 '- isobutyl -5'-propyl phenyl)-5-chloro benzotriazol 2-(2 '-hydroxy-3', 5'-G tert-buthylphenyl) benzotriazol, 2'-hydroxyphenyl benzotriazol system ultraviolet ray absorbents, such as 2-(2'- hydroxy-5'-methylphenyl) benzotriazol 2, 2'-dihydroxy-4-methoxybenzophenone, 2, 2'-dihydroxy -4, a 4'-dimethoxy benzophenone, 2, such as - tetrapod hydroxy benzophenone, and 2, 2', 4, and 4'2'-dihydroxy benzophenone system ultraviolet ray absorbents 2-hydroxy benzophenone system ultraviolet ray absorbents, such as 2-hydroxy-4-methoxybenzophenone, 2, and 4-dihydroxy benzophenone Salicylate system ultraviolet ray absorbents, such as a phenyl-salicylate and 4-tert-butyl-phenyl-SARISHI rate Cyanoacrylate system ultraviolet ray absorbents, such as the 2-ethyl-hexyl-2-cyano -3, 3-diphenyl acrylate, the ethyl-2-cyano -3, 3-diphenyl acrylate, the octyl-2-cyano -3, and 3-diphenyl acrylate, can be used. The addition of these ultraviolet ray absorbents is usually about 0.1 - 10 % of the weight. It may use together with the aforementioned radical scavenger, and may use, and the benzotriazol system of a non-chlorine system, a benzophenone system, or a cyanoacrylate system is especially suitable for these ultraviolet ray absorbents as an ultraviolet ray absorbent from a viewpoint of coexistence with weatherability and a hot water resistance in that case, considering the 2nd purpose of this invention, and the benzotriazol system of a non-chlorine system is suitable for them also in especially inside.

[0030] By the way, it is more more desirable to form the aforementioned protective layer 6 by the resin which has an isocyanate machine, if there is the above-mentioned ultraviolet ray absorbent when adding this, although it is the ultraviolet ray absorbent of the organic system which has OH basis in a molecule. As this reason, especially in olefin system thermoplastics, since OH basis of an ultraviolet ray absorbent and the isocyanate machine of the aforementioned protective layer 6 carry out a urethane bond and are

caught in the aforementioned protective layer 6 even if it is easy to ooze out and the aforementioned ultraviolet ray absorbent oozes out to the aforementioned protective layer 6, the ultraviolet ray absorbent of an organic system can prevent that an ultraviolet ray absorbent oozes out with time to up to the aforementioned protective layer 6, and pollutes the front face of the aforementioned protective layer 6. As a resin which has this isocyanate machine, 2 liquid hardening type urethane resin, 1 liquid moisture hardening type urethane resin, etc. are mentioned.

[0031] Moreover, the aforementioned olefin system thermoplastics is an inflammability and the aforementioned foaming resin layer 3 and the aforementioned coloring resin layer 4 which are formed by this also turn into an inflammable layer. However, as for a makeup sheet, fire retardancy is usually required at least. Therefore, a flame retarder is added by the aforementioned foaming resin layer 3 and the aforementioned coloring resin layer 4 which consist of the aforementioned olefin system thermoplastics, and fire retardancy is given to the aforementioned foaming resin layer 3 and the aforementioned coloring resin layer 4. As a flame retarder used for this, the inorganic bulking agent which consists of one sort or two sorts or more of mixture of inorganic substances, such as an aluminum hydroxide, a magnesium hydroxide, a calcium carbonate, a barium carbonate, and titanium oxide, can be mentioned. The addition to the aforementioned olefin system thermoplastics of this flame retarder is the aforementioned olefin system thermoplastics 100 that what is necessary is just to be able to secure the fire retardancy needed as a makeup sheet. It is 50-200 in general to the weight section. The weight section is suitable. In addition, flame retarders, such as phosphoric ester and silicone powder, can be mentioned.

[0032] Moreover, in the makeup sheet 1 or 11, although illustration is not carried out, you may prepare an adhesives layer between the layers of the aforementioned paper base 2 and the aforementioned foaming resin layer 3, or between the layers of the aforementioned coloring resin layer 4 and the aforementioned pattern layer 5. Thus, let layer indirect arrival intensity of the aforementioned paper base 2 and the aforementioned foaming resin layer 3, or layer indirect arrival intensity of the aforementioned coloring resin layer 4 and the aforementioned pattern layer 5 be a still stronger thing by preparing an adhesives layer compared with the case where an adhesives layer is not prepared. As what forms this adhesives layer, 2 liquid hardening type urethane resin, 1 liquid moisture hardening type urethane resin is suitable. as the formation method Or the aforementioned 2 liquid hardening type urethane resin, What solution-ized the aforementioned 1 liquid moisture hardening type urethane resin Or well-known gravure, Can form by carrying out coating between each class by the coating methods, such as the roll coat method, and Moreover, in the case of 1 liquid moisture hardening type urethane resin, it can form by carrying out coating like the above by the coating methods, such as the roll coat method of common knowledge of the aforementioned 1 liquid moisture hardening type urethane resin which carried out heating fusion, and the knockout coat method. As an amount of coating of this adhesives layer 7, it is 0.5 - 5.0 g/m2 by the time of dry cleaning. It is suitable.

[0033]

[Example] An example is given to below and the above-mentioned this invention is explained in more detail.

Nonflammable paper [** people Make of example 1 basis-weight 97 g/m2 : The coloring

resin stratification constituent of combination shown in the foaming resin stratification constituent and Table 2 of the combination shown in Table 1 on this front face is co-extruded by two-layer from a T die using WK-NRI. Non-foamed nonflammable paper 97 g/m2/foaming resin layer 100 The layered product which consists of mum / 40 micrometers of coloring resin layers is produced. It is an acrylic-urethane resin (an acrylic polyol is used as a prepolymer) to the field which performed corona discharge processing to the aforementioned coloring resin stratification plane of this layered product, and performed this corona discharge processing behind. Gravure was carried out with the printing ink which consists of saying 2 liquid reaction type resin in which react to with an isocyanate and a urethane bond is made to form, the pattern layer of a grain handle pattern was formed, and coating was carried out so that it might become 2 g/m2 at the time of dry cleaning with the gravure of common knowledge of 2 liquid hardening type urethane resin on this whole pattern stratification plane surface. While making the foaming resin layer which is not foamed to this thing at a heating foaming furnace (it is 1 minute at 200 **C) foam, the embossing version of a grain handle pattern performed embossing from the aforementioned protective-layer side, and the makeup sheet of one example of this invention was obtained.

[0035]
[Table 2]

[0036] Nonflammable paper [** people Make of example 2 basis-weight 97 g/m2 : The coloring resin stratification constituent of combination shown in the foaming resin stratification constituent and Table 4 of the combination shown in Table 3 on this front face is co-extruded by two-layer from a T die using WK-NRI. Non-foamed nonflammable paper 97 g/m2/foaming resin layer 120 The layered product which consists of mum / 20 micrometers of coloring resin layers is produced. It is an acrylic-urethane resin (an acrylic polyol is used as a prepolymer) to the field which performed corona discharge processing to the aforementioned coloring resin stratification plane of this layered product, and performed this corona discharge processing behind. Gravure was carried out with the printing ink which consists of saying 2 liquid reaction type resin in which react to with an isocyanate and a urethane bond is made to form, the pattern layer of a brush-mark handle pattern was formed, and coating was carried out so that it might become 2 g/m2 at the time of dry cleaning with the gravure of common knowledge of 2 liquid hardening type urethane resin on this whole pattern stratification plane surface. While making the foaming resin layer which is not foamed to this thing at a heating foaming furnace (it is 1 minute at 200 **C) foam, the embossing version of a brush-mark handle pattern performed embossing from the aforementioned protective-layer side, and the makeup sheet of other examples of this invention was obtained.
[0037]
[Table 3]

[0038]

[Table 4]

[0039] 97g of example of comparison 1 basis weights/, nonflammable paper [** people Make of m2 : The foaming resin stratification constituent of combination shown in Table 5 is extruded by 140 mum thickness by the monolayer from a T die on this front face using WK-NRI. Non-foamed nonflammable paper 97 g/m2/foaming resin layer 140 The layered product which consists of mum is produced. Corona discharge processing is performed to the foaming resin stratification plane which is not foamed [of this layered product / aforementioned]. behind It is an acrylic-urethane resin (an acrylic polyol is used as a prepolymer) to the field which performed this corona discharge processing. Gravure was carried out with the printing ink which consists of saying 2 liquid reaction type resin in which react to with an isocyanate and a urethane bond is made to form, the pattern layer of a grain handle pattern was formed, and coating was carried out so that it might become 2 g/m2 at the time of dry cleaning with the gravure of common knowledge of 2 liquid hardening type urethane resin on this whole pattern stratification plane surface. While making the foaming resin layer which is not foamed to this thing at a heating foaming furnace (it is 1 minute at 200 **C) foam, the embossing version of a grain handle pattern performed embossing from the aforementioned protective-layer side, and the makeup sheet made into the example of comparison was obtained.
[0040]
[Table 5]

[0041] About the makeup sheet of the examples 1 and 2 produced above and the example 1 of comparison, while measuring the whiteness degree, the degree of influence to the pattern layer of this was checked visually, and this result was collectively shown in Table 6.
[0042]
[Table 6]

The notes whiteness degree made standard lives (magnesium oxide) 100%. It is a number-of-cases value.
[0043] While having the whiteness degree which was excellent as compared with the example 1 of comparison, to the pattern layer of the example 1 of comparison having become what grew yellow a little in response to the influence of a foaming resin layer, the pattern layer of the examples 1 and 2 of this invention does not have yellowish color, either, and the examples 1 and 2 of this invention were able to reproduce the original pattern layer, so that clearly also from the result of Table 6.
[0044]
[Effect of the Invention] Although the whiteness as a makeup sheet has been pursued by adding conventionally the titanium dioxide which is a high concealment pigment in a foaming resin layer although the makeup sheet of this invention has given **** explanation until now Although yellowish color surely arose under the influence of the foaming agent used for a foaming resin layer and the design of a makeup sheet was

affected not a little The effect that the original whiteness in which a titanium dioxide has the coloring resin layer which prepares the titanium dioxide which is a high concealment pigment by considering a foaming resin layer as the composition which prepares independently can be obtained is done so. Moreover, a pattern layer does a much more remarkable effect so in the design which made white the keynote. Furthermore, the makeup sheet of this invention does so the effect that the problem of intoxication by suction of the detrimental gas which occurs in case of the problem of scrap wood processing or a fire is also solvable, by using olefin system thermoplastics for the thermoplastics used for a foaming resin layer or a coloring resin layer.

TECHNICAL FIELD

[The technical field to which invention belongs] this invention relates to the makeup sheet which prevents in more detail that coloring factors, such as yellowish color of a foaming layer, influence a design about the makeup sheet used for the interior of a building, surface makeup of fittings, the interior of vehicles, etc.

PRIOR ART

[Description of the Prior Art] Conventionally, a vinyl-chloride-resin layer is formed on a paper base, a pattern layer is prepared on this vinyl-chloride-resin layer, the aforementioned vinyl-chloride-resin layer is made to foam, a concavo-convex pattern is given, and the so-called vinyl chloride makeup sheet which gave design nature with a feeling of volume and cushioning properties is used widely. This vinyl chloride makeup sheet raises the concealment nature of a foaming resin layer, and the titanium dioxide which is usually a high concealment pigment is added by the foaming resin layer in order to raise design nature.

[0003] However, yellowish color arises under the influence of a foaming agent, and the foaming resin layer by which this titanium dioxide was added serves as whiteness which yellow required, without the whiteness which a titanium dioxide originally has being discovered, and has the problem of spoiling design nature. Furthermore, a pattern layer is affected, the whole pattern layer serves as a design which wore yellow, and this yellowish color has the problem that an original design is not reproduced. Especially this phenomenon is appeared much more notably in the design to which the pattern layer made white the keynote, and has the problem of becoming that in which the design itself is completely different from an original design.

[0004] Moreover, as another problem, if incineration disposal is carried out, since gas with detrimental hydrogen chloride gas etc. will be generated at the time of incineration, this vinyl chloride makeup sheet has the problem of scrap wood processing in which incineration disposal cannot be performed, and a problem of poisoning by attracting gas with this hydrogen chloride gas detrimental in case of a fire etc. with a common incinerator.

EFFECT OF THE INVENTION

[Effect of the Invention] It is adding conventionally the titanium dioxide which is a high concealment pigment in a foaming resin layer, although the makeup sheet of this invention has given **** explanation until now. Although yellowish color surely arose under the influence of the foaming agent used for a foaming resin layer although the whiteness as a makeup sheet has been pursued and the design of a makeup sheet had affected not a little, when a foaming resin layer considers the coloring resin layer which prepares the titanium dioxide which is a high concealment pigment as the composition which prepares independently, the effect that the original whiteness which a titanium dioxide has can obtain does so. Moreover, a pattern layer does a much more remarkable effect so in the design which made white the keynote. Furthermore, the makeup sheet of this invention does so the effect that the problem of poisoning by suction of the detrimental gas which occurs in case of the problem of scrap wood processing or a fire is also solvable, by using olefin system thermoplastics for the thermoplastics used for a foaming resin layer or a coloring resin layer.

TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention] Then, the place which this invention is made in view of the above-mentioned trouble, and is made into the 1st purpose is offering the makeup sheet with which coloring factors', such as yellowish color of a foaming resin layer, do not influence a design, and the place made into the 2nd purpose is offering the makeup sheet which can be pressed [whether generating of hydrogen chloride gas etc. of detrimental gas can be performed, and] down, when carrying out incineration etc.

MEANS

[Means for Solving the Problem] As a result of inquiring that this invention person etc. should solve the above troubles, the makeup sheet of this invention according to claim 1 is characterized by preparing the base-material layer, the foaming resin layer which consists of thermoplastics containing the additive which makes a foaming agent a subject, and the coloring resin layer which makes a subject the thermoplastics containing the additive which makes a titanium dioxide a subject one by one. Thus, by constituting, coloring factors, such as yellowish color of the foaming resin layer by the foaming agent, can be covered by preparing a coloring resin layer. In order that it may not have said that the aforementioned coloring resin layer grows yellow and the aforementioned foaming resin layer may not express The foaming cell of a uniform configuration can be obtained efficiently, and while having design nature with a clear coloring resin layer without yellowish color etc., and a feeling of volume, the makeup sheet excellent in cushioning properties can be obtained.

[0007] Moreover, invention according to claim 2 is characterized by having a pattern

layer on the aforementioned coloring resin layer in the makeup sheet indicated to a claim 1. thus, the thing to constitute -- in addition -- much more -- high -- it can consider as a design makeup sheet Moreover, a pattern layer cannot be influenced of coloring factors, such as yellowish color of a foaming resin layer, and can discover an original pattern layer.

[0008] Moreover, invention according to claim 3 is characterized by having a protective layer on the maximum front face by the side of the aforementioned coloring resin stratification of the aforementioned makeup sheet in the makeup sheet indicated to either of the claims 1 and 2. Thus, by constituting, the makeup sheet which was further excellent in abrasion resistance, chemical resistance, resistance to contamination, etc. can be obtained.

[0009] Moreover, invention according to claim 4 is characterized by the thing which are located in the aforementioned base-material layer and an opposite side and which it applies to the aforementioned foaming resin layer from an outside layer most, and is performed for the concavo-convex pattern in the makeup sheet indicated to either of the claims 1-3. Thus, the concavo-convex pattern of various configurations can be acquired by constituting.

[0010] Moreover, in the makeup sheet which indicates invention according to claim 5 to a claim 1, the aforementioned thermoplastics is characterized by the bird clapper from olefin system thermoplastics. Thus, by constituting, the comparatively low cost makeup sheet which can solve the problem of intoxication by attracting gas with detrimental problem of scrap wood processing, hydrogen chloride gas which occurs in case of a fire can be obtained.

[0011] Moreover, invention according to claim 6 is characterized by the melting point being higher than the thermoplastics in which the thermoplastics which forms the aforementioned coloring resin layer forms the aforementioned foaming resin layer in the makeup sheet indicated to a claim 5. Thus, while being able to raise the foaming efficiency of a foaming resin layer certainly by constituting, the foaming resin layer of an almost uniform configuration with little variation in a foaming cell can be obtained.

[0012] Moreover, invention according to claim 7 is characterized by at least one of a flame retarder and the radical scavengers being added by the aforementioned foaming resin layer and/or the aforementioned coloring resin layer in a makeup sheet given in either of the claims 5 and 6. Thus, while being able to give fire retardancy to a foaming resin layer and/or a coloring resin layer by constituting, degradation of the foaming resin layer by ultraviolet rays and/or a coloring resin layer can be prevented, and weatherability can be raised.

[0013] Moreover, invention according to claim 8 is characterized by preparing the adhesives layer between the layers of the aforementioned base-material layer and the aforementioned foaming resin layer, and/or between the layers of the aforementioned coloring resin layer and the aforementioned pattern layer in the makeup sheet indicated to either of the claims 1-7. Thus, let class indirect arrival intensity be a still stronger thing by constituting.

[0014] Moreover, invention according to claim 9 is characterized by the aforementioned foaming agent being a pyrolyzed type foaming agent in the makeup sheet indicated to either of the claims 1-8. Thus, by constituting, the foaming agent of a low cost can be used and cost of a makeup sheet can be made cheap. Moreover, also in the

aforementioned foaming agent, since an AZOJI carvone amide or an azobis formamide are not detrimental while they are excellent in fire retardancy or self-extinguishing and give fire retardancy to a foaming resin layer, they are suitable.
[0015] Moreover, in the makeup sheet which indicates invention according to claim 10 to either of the claims 1-9, the aforementioned base-material layer is characterized by the bird clapper from the lining paper for wallpaper. Thus, fire retardancy can be given to a base-material layer by constituting.
[0016]
[Embodiments of the Invention] The above-mentioned this invention is explained in more detail below using a drawing etc. First, drawing 1 is the lamination view of the 1st operation gestalt of the makeup sheet of this invention, and drawing 2 is the lamination view of the 2nd operation gestalt of the makeup sheet of this invention. 1 in drawing, and 11 -- a makeup sheet and 2 -- in a coloring resin layer and 5, a pattern layer and 6 show a protective layer and 7 shows [a paper base and 3 / a foaming resin layer and 4] a concavo-convex pattern, respectively
[0017] Drawing 1 shows the lamination view of the 1st operation gestalt of the makeup sheet of this invention, and the makeup sheet 1 of this invention forms the foaming resin layer 3 which consists of thermoplastics containing the additive which makes a foaming agent a subject on a paper base 2, and forms the white coloring resin layer 4 which consists of thermoplastics containing the additive which makes a titanium dioxide a subject on this foaming resin layer 3. Thus, by constituting, it cannot be influenced by the foaming resin layer 3 which the coloring resin layer 4 produces with a foaming agent of yellowish color, the color of the original coloring resin layer 4, i.e., white, can be discovered, and design nature can be raised.
[0018] What is called lining papers for usual wallpaper, such as minerals paper which mixed minerals agents, such as a flameproof paper of the pulp subject into which water-soluble flame retarders, such as sulfanil GUANAJIN and phosphoric acid guanidine, were infiltrated or an aluminum hydroxide, and a magnesium hydroxide, as the aforementioned paper base 2 used for this invention, can be used, and 50 - 300 g/m2 is suitable as the basis weight.
[0019] moreover, as thermoplastics used for the aforementioned foaming resin layer 3 and the aforementioned coloring resin layer 4 For example, vinyl chloride system resins, such as vinyl chloride resin, a vinyl chloride vinyl acetate copolymer, and a vinyl chloride-acrylic copolymer, a polyacrylonitrile, Or acrylic resins, such as a copolymer which consists of a polyacrylonitrile, methyl acrylate, and a butadiene, One sort or ethylene of polyolefines, such as polyethylene, polypropylene, a polybutene, a polybutadiene, and a polyisoprene Two or more sorts of copolymers of olefins, such as a propylene, a butene, a butadiene, and an isoprene A carbon number Or the copolymer of four or more alpha olefins (line low density polyethylene), Or an ethylene-acrylic-acid copolymer, an ethylene-methyl-acrylate copolymer, Although olefin system resins, such as an ethylene-ethyl-acrylate copolymer, an ethylene-methacrylic-acid copolymer, an ethylene vinylacetate copolymer, and an ethylene-vinyl acetate copolymer saponification object, urethane resins, or these mixed resins can be used When the 2nd purpose of this invention or cost is taken into consideration, polyethylene, One sort or ethylene of polyolefines, such as polypropylene, a polybutene, a polybutadiene, and a polyisoprene Two or more sorts of copolymers of olefins, such as a propylene, a butene, a butadiene,

and an isoprene A carbon number Or the copolymer of four or more alpha olefins (line low density polyethylene), Or an ethylene-acrylic-acid copolymer, an ethylene-methyl-acrylate copolymer, It is desirable to use olefin system resins, such as an ethylene-ethyl-acrylate copolymer, an ethylene-methacrylic-acid copolymer, an ethylene vinylacetate copolymer, and an ethylene-vinyl acetate copolymer saponification object, urethane resins, or these mixed resins.

[0020] Moreover, the thing which melted and solution-ized the above-mentioned thermoplastics to the solvent as a method of forming the aforementioned foaming resin layer 3 and the aforementioned coloring resin layer 4 using the above-mentioned thermoplastics, Or the roll coat method of common knowledge of what emulsified and emulsion-ized the above-mentioned thermoplastics, If it can form by carrying out coating and drying by gravure, the knife coat method, etc. and is in the aforementioned foaming resin layer 3, it can form by making it foam at a heating foaming furnace further. Moreover, it can form also by carrying out heating melting of the above-mentioned thermoplastics with a well-known T die extruder, and extruding it as an option. In this case, if it is, you may form the aforementioned foaming resin layer 3 by making it foam at the same time it carries out heating melting of the above-mentioned thermoplastics with a T die extruder and extrudes it, and carrying out heating melting with a T die extruder, extruding, and making it foam at a heating foaming furnace behind.

[0021] Moreover, although the thermal-expansion type capsule foaming agent which connoted the hydrocarbon of the low boiling point as a foaming agent used for the aforementioned foaming resin layer 3 can also be used, while being a low cost, the pyrolyzed type foaming agent of azo system compounds, such as an AZOJI carvone amide from the point which is excellent in fire retardancy or self-extinguishing, and can give fire retardancy to the aforementioned foaming resin layer 3, and an azobis formamide, is suitable. In addition, the amount of mixtures to the aforementioned thermoplastics of the aforementioned pyrolyzed type foaming agent is the aforementioned thermoplastics 100 in general, although what is necessary is just to decide suitably by the design nature demanded. 2 - 10 weight section is suitable to the weight section.

[0022] Drawing 2 shows the lamination view of the 2nd operation gestalt of the makeup sheet of this invention, and it forms the concavo-convex pattern 7, the makeup sheet 11 of the 2nd operation gestalt of this invention forming the pattern layer 5 on the aforementioned coloring resin layer 4 of the makeup sheet 1 of the 1st operation gestalt shown in drawing 1 , and forming a protective layer 6 on this pattern layer 5, and applying it to the aforementioned foaming resin layer 3 from this protective-layer 6 side. Thus, the pattern layer 5 which the aforementioned white coloring resin layer 4 has an original whiteness degree like the 1st operation gestalt, without being influenced by the aforementioned foaming resin layer 3 of yellowish color, and prepared on the aforementioned coloring resin layer 4 by constituting can also reappear the outstanding design nature, without spoiling an original design, since yellowish color of the aforementioned foaming resin layer 3 is intercepted in the aforementioned coloring resin layer 4.

[0023] Moreover, generally formation of the aforementioned pattern layer 5 can be formed in ink by the print processes of common knowledge, such as gravure, offset printing, silk screen printing, and decalcomania from an imprint sheet. As a printing

pattern, there are printing patterns, such as a grain handle, a grain handle, a texture handle, leather ****, a geometric figure, a character, a sign, or whole surface solid. As ink, as a vehicle, chlorination polyolefines, such as a chlorinated polyethylene and chlorination polypropylene, Polyester, the polyurethane which consists of an isocyanate and a polyol, Although two or more sorts can be mixed, it can use and one sort or the thing which added and ink-ized a pigment, a solvent, various adjuvants, etc. to this can be used, the poly acrylic, polyvinyl acetate, a polyvinyl chloride, a vinyl chloride vinyl acetate copolymer, a cellulose system resin, a polyamide system resin, etc. Considering the 2nd purpose of this invention, one sort, such as polyester, polyurethane which consists of an isocyanate and a polyol, the poly acrylic, polyvinyl acetate, a cellulose system resin, and a polyamide system resin, or the non-chlorine-based resin mixed two or more sorts is suitable.

[0024] Moreover, the aforementioned protective layer 6 gives abrasion resistance, chemical resistance, resistance to contamination, etc. to the makeup sheet 11 of this invention, resins, such as an epoxy system resin, an acrylic resin, an urethane system resin, a polyamide system resin, a polyester system resin, and an ionomer, are suitable for it, and what mixed one sort of the above-mentioned resin or two sorts or more in consideration of the adhesive property with the vehicle used for the pattern layer 6 or the thermoplastics used for the coloring resin layer 4 etc. should just be suitably used Moreover, what is necessary is just to carry out coating of the thing which solution-ized the aforementioned resin, or the thing which carried out heating fusion as the formation method of the aforementioned protective layer 6, for example, using suitably coating meanses, such as well-known gravure, the roll coat method, or the knockout coat method. As thickness of this protective layer 6, it is 0.5-100 by the time of dry cleaning. mum and usual are about 1-15 micrometers.

[0025] Moreover, formation of the aforementioned concavo-convex pattern 7 can form the concavo-convex pattern 7 by giving irregularity and cooling behind with the embossing version, from the aforementioned protective-layer 6 side, being able to apply it to the aforementioned foaming resin layer 3 from the aforementioned protective layer 6, when it is in the state where the aforementioned makeup sheet 11 was heated, using a well-known sheet or the embossing machine of a rotary formula. as the configuration of this concavo-convex pattern 7 -- a grain board -- a conduit -- there are a slot, slate surface irregularity, a face side texture, crepe, a grain, a hairline, 10,000 filament slots, etc.

[0026] Moreover, although illustration is not carried out, the aforementioned concavo-convex pattern 7 cannot be overemphasized by that it may apply to the foaming resin layer 3, and you may form from the coloring resin layer 4 side in the aforementioned makeup sheet 1.

[0027] Next, the case where processing uses easy olefin system thermoplastics for the thermoplastics used for the aforementioned foaming resin layer 3 and the aforementioned coloring resin layer 4 eco-friendlily [it is cheap in comparison also in cost, and / since there is also no problem of suction of the detrimental gas which occurs in case of the problem of scrap wood processing or a fire] is explained. Although this olefin system thermoplastics is eco-friendly to thermoplastics, such as a polyvinyl chloride and the poly acrylic, and excellent in it in chemical resistance or resistance to contamination with ****, when it is exposed to the problem, i.e., daylight, that weatherability is bad, from the outdoors, the aforementioned olefin system thermoplastics deteriorates and it has the

problem that layer indirect arrival intensity with each class which adjoins the aforementioned olefin system thermoplastics falls with time.
[0028] Therefore, when using olefin system thermoplastics for the thermoplastics used for the aforementioned foaming resin layer 3 and the aforementioned coloring resin layer 4, it is necessary to prevent with-time degradation by the daylight (especially ultraviolet rays) of this olefin system thermoplastics. In order to prevent this, it is good for olefin system thermoplastics to add a radical scavenger. As this radical scavenger, a hindered amine system radical scavenger is desirable. As this reason, a hindered amine system radical scavenger has a tetrapod alkyl piperidine in ****, it is presumed that there is a radical prehension operation which catches the radical generated in ultraviolet rays, and also the effect is demonstrated by the various mechanisms of action, such as an inactive operation of a hydroperoxide (ROOH), and the performance which was excellent as a multirole stabilizer is obtained. As an example of a hindered amine system radical scavenger Screw-(2, 2, 6, and 6-tetramethyl-4-piperidyl) sebacate, Screw-(N-methyl -2, 2 and 6, and 6-tetramethyl-4-piperidyl) sebacate, Screw-(1, 2, 2, 6, and 6-pen reservoir chill-4-piperidyl) sebacate, 1, 2, 2, 6, and 6-pen reservoir chill-4-piperidyl-tridecyl - 1, 2, 3, 4-butanetetracarboxylate, TETORAGISU - (2, 2, 6, and 6-tetramethyl-4-piperidyl) Hindered amine system radical scavengers, such as a compound currently indicated by the others which are -1, 2 and 3, 4-butanetetracarboxylate, etc., for example, JP,4-82625,B, can be mentioned. It is olefin system thermoplastics 100 which constitutes the aforementioned foaming resin layer 3 and the aforementioned coloring resin layer 4 as a charge of addition of this hindered amine system radical scavenger. It is 0.01-3.0 to the weight section. It is appropriate to carry out weight section addition.
[0029] Moreover, an ultraviolet ray absorbent can also be added to the aforementioned olefin system thermoplastics if needed. As an ultraviolet ray absorbent, for example A 2-(2 '- hydroxy-3', 5'-G tert-buthylphenyl)-5-chloro benzotriazol, A 2-(2'-hydroxy-3 '-tert-butyl -5'-methylphenyl)-5-chloro benzotriazol, A 2-(2'-hydroxy-3 '-tert-amyl -5'-isobutyl phenyl)-5-chloro benzotriazol, A 2-(2'-hydroxy-3 '- isobutyl -5'-methylphenyl)-5-chloro benzotriazol, 2'-hydroxyphenyl-5-chloro benzotriazol system ultraviolet ray absorbents, such as a 2-(2'-hydroxy-3 '- isobutyl -5'-propyl phenyl)-5-chloro benzotriazol 2-(2 '-hydroxy-3', 5'-G tert-buthylphenyl) benzotriazol, 2'-hydroxyphenyl benzotriazol system ultraviolet ray absorbents, such as 2-(2'- hydroxy-5'-methylphenyl) benzotriazol 2, 2'-dihydroxy-4-methoxybenzophenone, 2, 2'-dihydroxy -4, a 4'-dimethoxy benzophenone, 2, such as - tetrapod hydroxy benzophenone, and 2, 2', 4, and 4'2'-dihydroxy benzophenone system ultraviolet ray absorbents 2-hydroxy benzophenone system ultraviolet ray absorbents, such as 2-hydroxy-4-methoxybenzophenone, 2, and 4-dihydroxy benzophenone Salicylate system ultraviolet ray absorbents, such as a phenyl-salicylate and 4-tert-butyl-phenyl-SARISHI rate Cyanoacrylate system ultraviolet ray absorbents, such as the 2-ethyl-hexyl-2-cyano -3, 3-diphenyl acrylate, the ethyl-2-cyano -3, 3-diphenyl acrylate, the octyl-2-cyano -3, and 3-diphenyl acrylate, can be used. The addition of these ultraviolet ray absorbents is usually about 0.1 - 10 % of the weight. It may use together with the aforementioned radical scavenger, and may use, and the benzotriazol system of a non-chlorine system, a benzophenone system, or a cyanoacrylate system is especially suitable for these ultraviolet ray absorbents as an ultraviolet ray absorbent from a viewpoint of coexistence with weatherability and a hot water resistance in that case, considering the 2nd purpose of this invention, and the benzotriazol system of

a non-chlorine system is suitable for them also in especially inside.
[0030] By the way, it is more more desirable to form the aforementioned protective layer 6 by the resin which has an isocyanate machine, if there is the above-mentioned ultraviolet ray absorbent when adding this, although it is the ultraviolet ray absorbent of the organic system which has OH basis in a molecule. As this reason, especially in olefin system thermoplastics, since OH basis of an ultraviolet ray absorbent and the isocyanate machine of the aforementioned protective layer 6 carry out a urethane bond and are caught in the aforementioned protective layer 6 even if it is easy to ooze out and the aforementioned ultraviolet ray absorbent oozes out to the aforementioned protective layer 6, the ultraviolet ray absorbent of an organic system can prevent that an ultraviolet ray absorbent oozes out with time to up to the aforementioned protective layer 6, and pollutes the front face of the aforementioned protective layer 6. As a resin which has this isocyanate machine, 2 liquid hardening type urethane resin, 1 liquid moisture hardening type urethane resin, etc. are mentioned.
[0031] Moreover, the aforementioned olefin system thermoplastics is an inflammability and the aforementioned foaming resin layer 3 and the aforementioned coloring resin layer 4 which are formed by this also turn into an inflammable layer. However, as for a makeup sheet, fire retardancy is usually required at least. Therefore, a flame retarder is added by the aforementioned foaming resin layer 3 and the aforementioned coloring resin layer 4 which consist of the aforementioned olefin system thermoplastics, and fire retardancy is given to the aforementioned foaming resin layer 3 and the aforementioned coloring resin layer 4. As a flame retarder used for this, the inorganic bulking agent which consists of one sort or two sorts or more of mixture of inorganic substances, such as an aluminum hydroxide, a magnesium hydroxide, a calcium carbonate, a barium carbonate, and titanium oxide, can be mentioned. The addition to the aforementioned olefin system thermoplastics of this flame retarder is the aforementioned olefin system thermoplastics 100 that what is necessary is just to be able to secure the fire retardancy needed as a makeup sheet. It is 50-200 in general to the weight section. The weight section is suitable. In addition, flame retarders, such as phosphoric ester and silicone powder, can be mentioned.
[0032] Moreover, in the makeup sheet 1 or 11, although illustration is not carried out, you may prepare an adhesives layer between the layers of the aforementioned paper base 2 and the aforementioned foaming resin layer 3, or between the layers of the aforementioned coloring resin layer 4 and the aforementioned pattern layer 5. Thus, let layer indirect arrival intensity of the aforementioned paper base 2 and the aforementioned foaming resin layer 3, or layer indirect arrival intensity of the aforementioned coloring resin layer 4 and the aforementioned pattern layer 5 be a still stronger thing by preparing an adhesives layer compared with the case where an adhesives layer is not prepared. As what forms this adhesives layer, 2 liquid hardening type urethane resin, 1 liquid moisture hardening type urethane resin is suitable. as the formation method Or the aforementioned 2 liquid hardening type urethane resin, What solution-ized the aforementioned 1 liquid moisture hardening type urethane resin Or well-known gravure, Can form by carrying out coating between each class by the coating methods, such as the roll coat method, and Moreover, in the case of 1 liquid moisture hardening type urethane resin, it can form by carrying out coating like the above by the coating methods, such as the roll coat method of common knowledge of the aforementioned 1 liquid moisture hardening type urethane

resin which carried out heating fusion, and the knockout coat method. As an amount of coating of this adhesives layer 7, it is 0.5 - 5.0 g/m2 by the time of dry cleaning. It is suitable.

EXAMPLE

[Example] An example is given to below and the above-mentioned this invention is explained in more detail.
Nonflammable paper [** people Make of example 1 basis-weight 97 g/m2: Co-extrude the coloring resin layer formation constituent of combination shown in the foaming resin layer formation constituent and Table 2 of the combination shown in Table 1 on this front face by two-layer from a T die using WK-NRI. Non-foamed nonflammable paper 97 g/m2/foaming resin layer 100 The layered product which consists of mum / 40 micrometers of coloring resin layers is produced. It is an acrylic-urethane resin (an acrylic polyol is used as a prepolymer) to the field which performed corona discharge processing to the aforementioned coloring resin stratification plane of this layered product, and performed this corona discharge processing behind. Gravure was carried out with the printing ink which consists of saying 2 liquid reaction type resin in which react to with an isocyanate and a urethane bond is made to form, the pattern layer of a grain handle pattern was formed, and coating was carried out so that it might become 2 g/m2 at the time of dry cleaning with the gravure of common knowledge of 2 liquid hardening type urethane resin on this whole pattern stratification plane surface. While making the foaming resin layer which is not foamed to this thing at a heating foaming furnace (it is 1 minute at 200 **C) foam, the embossing version of a grain handle pattern performed embossing from the aforementioned protective-layer side, and the makeup sheet of one example of this invention was obtained.
[0034]
[Table 1] In JP
[0035]
[Table 2] In JP

[0036] Nonflammable paper [** people Make of example 2 basis-weight 97 g/m2: Co-extrude the coloring resin layer formation constituent of combination shown in the foaming resin layer formation constituent and Table 4 of the combination shown in Table 3 on this front face by two-layer from a T die using WK-NRI. Non-foamed nonflammable paper 97 g/m2/foaming resin layer 120 The layered product which consists of mum / 20 micrometers of coloring resin layers is produced. It is an acrylic-urethane resin (an acrylic polyol is used as a prepolymer) to the field which performed corona discharge processing to the aforementioned coloring resin stratification plane of this layered product, and performed this corona discharge processing behind. Gravure was carried out with the printing ink which consists of saying 2 liquid reaction type resin in which react to with an isocyanate and a urethane bond is made to form, the pattern layer of a brush-mark handle pattern was formed, and coating was carried out so that it might become 2 g/m2 at the time of dry cleaning with the gravure of common knowledge

of 2 liquid hardening type urethane resin on this whole pattern stratification plane surface. While making the foaming resin layer which is not foamed to this thing at a heating foaming furnace (it is 1 minute at 200 **C) foam, the embossing version of a brush-mark handle pattern performed embossing from the aforementioned protective-layer side, and the makeup sheet of other examples of this invention was obtained.
[0037]
[Table 3] In JP

[0038]
[Table 4] In JP

[0039] 97g of example [of comparison] 1 basis weights/, nonflammable paper [** people Make of m2: Extrude the foaming resin layer formation constituent of combination shown in Table 5 by 140 mum thickness by the monolayer from a T die on this front face using WK-NRI. Non-foamed nonflammable paper 97 g/m2/foaming resin layer 140 The layered product which consists of mum is produced. Corona discharge processing is performed to the foaming resin stratification plane which is not foamed [of this layered product / aforementioned]. behind It is an acrylic-urethane resin (an acrylic polyol is used as a prepolymer) to the field which performed this corona discharge processing. Gravure was carried out with the printing ink which consists of saying 2 liquid reaction type resin in which react to with an isocyanate and a urethane bond is made to form, the pattern layer of a grain handle pattern was formed, and coating was carried out so that it might become 2 g/m2 at the time of dry cleaning with the gravure of common knowledge of 2 liquid hardening type urethane resin on this whole pattern stratification plane surface. While making the foaming resin layer which is not foamed to this thing at a heating foaming furnace (it is 1 minute at 200 **C) foam, the embossing version of a grain handle pattern performed embossing from the aforementioned protective-layer side, and the makeup sheet made into the example of comparison was obtained.
[0040]
[Table 5] In JP

[0041] About the makeup sheet of the examples 1 and 2 produced above and the example 1 of comparison, while measuring the whiteness degree, the degree of influence to the pattern layer of this was checked visually, and this result was collectively shown in Table 6.
[0042]
[Table 6] In JP

The notes whiteness degree made standard lives (magnesium oxide) 100%. It is a number-of-cases value.
[0043] While having the whiteness degree which was excellent as compared with the example 1 of comparison, to the pattern layer of the example 1 of comparison having become what grew yellow a little in response to the influence of a foaming resin layer, the pattern layer of the examples 1 and 2 of this invention does not have yellowish color, either, and the examples 1 and 2 of this invention were able to reproduce the original

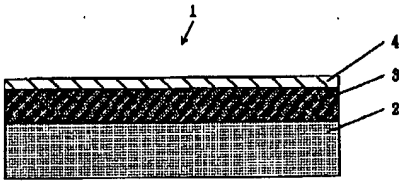
pattern layer, so that clearly also from the result of Table 6.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1] It is the lamination view of the 1st operation gestalt of the makeup sheet concerning this invention.
[Drawing 2] It is the lamination view of the 2nd operation gestalt of the makeup sheet concerning this invention.
[Description of Notations]
1 11 Makeup sheet
2 [ ] Paper Base
3 [ ] Foaming Resin Layer
4 [ ] Coloring Resin Layer
5 [ ] Pattern Layer
6 [ ] Protective Layer
7 [ ] Concavo-convex Pattern

DRAWINGS

[Drawing 1]



[Drawing 2]